



# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P13881/MA	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA416
International application No. PCT/EP2004/052204	International filing date (day/month/year) 16.09.2004	Priority date (day/month/year) 15.10.2003	
International Patent Classification (IPC) or national classification and IPC G06F3/023, G06F3/033			
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 9 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand  25.07.2005		Date of completion of this report  24.10.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840		Authorized Officer  Griesbach, A  Telephone No. +49 30 25901-419 	

INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITYInternational application No.  
PCT/EP2004/052204

AP20 Rec'd PCT/EP 13 APR 2006

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-6 as originally filed

**Claims, Numbers**

1-20 received on 25.07.2005 with letter of 21.07.2005

**Drawings, Sheets**

1-3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/052204

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-20
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-20
Industrial applicability (IA)	Yes: Claims	1-20
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/EP2004/052204

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1a: "Keytouch MultiPlay", InterGrafx Inc., Pasadena, USA, 2003

found on 20 February 2004 at:

<http://www.keytouch.net/zip/MultiPlay%20-%20Users'%20Guide.zip>

D1b: "Product Information", KeyTouch, 2003

found on 20 February 2004 at:

<http://www.keytouch.net/products.html>

D1c: "Screenshot of the KeyTouch MultiPlay Simulator num\_lead\_final0524.exe" as  
retrieved from:

<http://web.archive.org/web/20030714080411/keytouch.net/products.html>

on 22 February 2004

D1d: "Keytouch promises fast input on the go", Anthony Newman, InfoSync World,  
18 July 2003

found on 20 February 2004 at:

<http://www.infosync.com/news/n/3848.html>

D2: EP 0 802 658 A (NOKIA CORPORATION), 22 October 1997

Documents D1a-d are cited as evidence of the features of the software and corresponding input method for cellular telephones, developed by the company InterGrafx and publicly available under the brand name KeyTouch MultiPlay. This software was according to D1d known to the public not later than 18 July 2003. As this date is earlier than the filing date of the application, the technical features disclosed by this method belong to the relevant state of the art.

2. The application does not meet the requirements of Article 6 PCT, because claim 1 is not clear.

In claim 1, the formulations "part of an ordinary keypad" and "minimenu enable emulation of a whole keypad" are vague and indefinite as they do not have a defined technical meaning in the field at issue. In particular the expression "ordinary keyboard" covers every arrangement of keys (e.g. the so called QWERTY keyboards) while "emulation" could relate to any kind of functional or physical replacement of the keys of a keypad (e.g. the start of a voice input function by means of one of the soft keys of one of the minimenus). Therefore the scope of the claim is rendered unclear. According to the description of the application as filed (see page 3, line 31) an "ordinary keypad" probably refers to a keypad with twelve keys representing the numbers "0" to "9" and the special characters "\*" and "#" while from the same paragraph read as a whole (see page 3, lines 26 to 35) follows that "emulation of a whole keypad" means that the function of each of the twelve keys of a keypad as mentioned above can be selected by one of the softkeys represented in one of the minimenus.

3. Moreover, the present application does not meet the requirements of Article 33 PCT, because the subject-matter of independent claim 1 does not involve an inventive step in the sense of Article 33(2) PCT.

- 3.1. The known input method and input device working according to that method whose features are described in Document D1a to D1d (see in particular the paragraph titled "How It Works" of D1a and the lower right picture on the first page of D1b) disclose a device comprising display means for displaying images relating to the operation of the device (see D1a display of the cellular telephone), "dialling keys" which are used to initiate the displaying of small menus of soft keys (see D1c, example step-1 "key group" assigned to number dialling key 2 and temporarily displayed in the lower third of the telephones display) and a 4-way or 8-way key for controlling the navigation of a cursor (see D1a, paragraph titled "improved Ease of Use" in combination with the accompanying picture and paragraph titled "Product Specifications", second line). The soft keys are selectable by means of the 4-way or 8-way key (see D1c, example step-2).

3.2. Hence D1 discloses in combination all technical features of claim 1, except that it specifies that the cursor control key is a joystick. This is however a well know equivalent means for controlling the navigation of a cursor. Therefore claim 1 does not involve an inventive step.

4. The applicants arguments regarding inventive step of independent claim 1, as stated in his letter of 21 July 2005 replying to the Written Opinion are not convincing. The applicant generally argues that the input system as disclosed in D1a-d extends the functionality of the input keys which are placed on a keypad while the input device according to the present application reduces the number of key elements necessary to access the functions of an electronic device.

However this approach is directed to the association of several functions (e.g. several characters; see description of the present application, page 2, line 6 to 7) with each of the soft keys, the joystick being used to toggle between these functions (or characters). However, as it has been discussed in the Written Opinion with respect to depended claims 6 and 7 of the application as originally filed, toggling between different functions or characters with a given key (by multiple pressing of the key) is a means widely used in the field of mobile phones in order to reduce the number of keys or to increase the number of available characters and/ or functions. Knowing the device of D1a-d the skilled person would readily extend this idea to the 4-way-key (or 8-way-key) of D1a-d, and associate each of its soft keys with several characters or functions whenever he wants to reduce the number of "dialling keys", serving as selecting means between the sub menus temporarily assigned to the soft keys controlled by the 4-way-key. Hence even if this idea were properly reflected by the claimed subject matter it would not be inventive because the man skilled in the art starting from D1 and only applying his general knowledge would arrive at the corresponding subject matter without applying inventive skills.

5. Dependent claims 2 to 20 do not contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect to novelty (Article 33(2) PCT) or inventive step (Article 33(3) PCT)

- 5.1. regarding claim 2:  
see D1a keypad working as function key means to select different menus of soft keys (i.e. key groups),
- 5.2. regarding claim 3:  
see D1a second subparagraph of the paragraph "Improved Ease of Use",
- 5.3. regarding claim 4:  
According to D1a the KeyTouch device contains 4 soft keys for any of the 12 keys of the keypad thereby it contains 48 (i.e. more than 12) soft keys spread over the numerous key groups.
- 5.4. regarding claim 5:  
The additional feature refers to a design option the man skilled in the art would chose according to the set of characters to be supported by the input device.
- 5.5. regarding claims 6 and 7:  
The additional features of these claims consists in associating several functions (e.g. several characters; see description of the present application, page 2, line 6 to 7) with each of the soft keys, the joystick being used to toggle between these functions (or characters). However, toggling between different functions or characters with a given key (by multiple pressing of the key) is a means widely used in the field of mobile phones in order to reduce the number of keys or to increase the number of available characters and/ or functions. Knowing the device of D1a-d the skilled person would readily extend this idea to the 4-way-key (or 8-way-key) of D1a-d, and associate each of its soft keys with several characters or functions, e.g. in order to reduce the number of sub menus (and hence the number of "dialling keys") or to increase the number of available characters or functions.
- 5.6. regarding claim 8:  
The KeyTouch device according to D1a is obviously suitable to be used with 2 hands e.g. by selecting one of the small menus corresponding to the different soft key groups

with the forefinger of one hand while selecting one of the soft keys with the thumb of the other hand.

5.7. regarding claim 9, 10, 12, 13 and 15 to 18:

The feature added by these claims relates to different, well known opportunities for the constructional realisation of a multi state selection means. The person skilled in the art would chose any of the mentioned means according to circumstances.

5.8. regarding claims 11, 14 and 19:

The feature added by these claims relates to the positioning of the function key means relative to the display and to the character selection joystick. To facilitate a two handed use of the communication device these function key means are located at sides of the device perpendicular to the side parallel to the display plane. However the same positioning has been used for the same purpose in the communication device of D2 (see figure 3A; column 8, line 13 to 21). The person skilled in the art would therefore include this feature into the design according to D1a-d without the use of any inventive skills. It should be noted that although D2 mentions an embodiment usable in one hand operation, the use of both hands is also implicitly foreseen (see column 8, line 17 to 21: "when the mobile terminal is held in one hand").

In the case that only two handed input operation (but no one hand operation) is needed, the placement of the second button of the function selecting means at the opposite side of the first one (as in figure 1 of the application) would be a mere design potion the skilled person would adopt e.g. according to user preferences.

5.9. regarding claim 20:

As the advantages of the input method of the present application are effective irrespective of the kind of electronic device it is applied to, its actual use in the specific devices mentioned in the claim does not involve an inventive step.

6. For the sake of completeness the following minor deficiencies are mentioned:



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(SEPARATE SHEET)**

International application No.

PCT/EP2004/052204

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the document D1 is not identified in the description and the relevant background art disclosed therein is not at least briefly discussed.

7. Because of the reasons stated in sections 2 to 5 above, claims 1 to 20 are not allowable. In view of the available prior art, it does not appear that any part of the application could serve as a basis for a new allowable claim.

AP20 Rec'd PCT/PTO 13 APR 2006

## CLAIMS

1. A device (1) comprising display means (2) for displaying images relating to the operation of the device; control means for controlling the display means (2) by means of a layered menu structure, a main joystick (3) for moving a cursor in menus and making selections, and a function key means (4A, 4B, 5, 6), **characterised** in that the control means is adapted to command display of one minimenu of a set of minimenus, each minimenu (8A, 8B, 8AB) adapted to display part of an ordinary keypad as soft keys (9), in response to operation of the function key means (4A, 4B, 5, 6), said soft keys (9) being selectable by means of the main joystick (3), wherein said minimenus enable emulation of a whole keypad.
2. A device according to claim 1, **characterised** in that the function key means (4A, 4B, 5, 6) is adapted to be operated into a number of states, each state being associated with a different minimenu (8A, 8B, 8AB).
3. A device according to claim 2, **characterised** in that the number of states is three, and each minimenu (8A, 8B, 8AB) comprises four soft keys.
4. A device according to claim 2, **characterised** in that said minimenus (8A, 8B, 8AB) in total comprise at least twelve keys.
5. A device according to claim 3 or 4, **characterised** in that said soft keys (9) are adapted to access the numbers 0-9 and \* and #, as well as the letters A-Z.
6. A device according to any one of claims 1 to 5, **characterised** in that each soft key (9) has several functions selectable by means of the main joystick (3).
7. A device according to claim 6, **characterised** in that the main joystick (3) is adapted to be operated several times in the same direction for selecting different functions of the same soft key (9).
8. A device according to any one of claims 1 to 7, **characterised** in that the main joystick (3) and the function key means (4A, 4B, 5, 6) are located on the device such that the joystick (3) is suitable for operating with one hand, and the function key means (4A, 4B, 5, 6) is suitable for operating with the other hand.